

# Academic Press Dictionary of Science and Technology

Edited by  
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# Academic Press Dictionary of Science and Technology



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**epitaxy** *Crystallography*. the oriented overgrowth of one crystalline material upon the surface of another. There is often an approximate agreement in lattice spacings in the two components. Thus, epitaxial. Also, epitaxial.

**epithalamus** *Anatomy*. a portion of the diencephalon that contains the genicular nuclei, the stria media, and the pineal body.

**epitheca** *Invertebrate Zoology*. 1. an external calcareous layer around the basal portion of the theca of many corals. 2. the outer or upper valve of a diatom cell wall.

**epithecium** *Mycology*. in fungi, a layer of tissue over the spore sacs.

**epithelia** *Histology*. the plural form of *epithelium*.

**epithelial** [ep'ə the'lē əl] *Histology*. of, relating to, or composed of epithelium or epithelial cells.

**epithelial cells** *Cell Biology*. cells that form the barrier between an organism and its external environment. These cells either may be involved in the secretion or uptake of liquids or nutrients, or may perform a simple barrier function.

**epithelialization** *Surgery*. the process of healing by the growth of epithelial cells over an area. Also, epithelization.

**epitheliochorial placenta** *Developmental Biology*. a placenta in which the uterine epithelial lining has not eroded but simply lies in apposition to the chorion.

**epithelioid cell** *Histology*. a macrophage that superficially resembles an epithelial cell.

**epithelioma** [ep'ə the'lē ō'mə] *Medicine*. 1. a tumor, either benign or malignant, derived from epithelium. 2. in popular use, a skin cancer.

**epitheliomuscular cell** *Invertebrate Zoology*. a cell with an elongated base that contains contractile fibrils, common in the epidermis of many invertebrates and nematodes. Also, MUSCULO-EPITHELIUM.

**epithelium** [ep'ə the'lē ōm] *Histology*. an animal tissue composed of cells that are packed tightly together, with little intercellular matrix; it covers the external surface of the body and also internal surfaces such as the lining of tracts and vessels.



frog epithelium

**epithema** *Vertebrate Zoology*. a horny excrescence on the bill of some birds, as in the casque of a hornbill.

**epithemiaceae** *Botany*. a small family of freshwater, brackish, and terrestrial diatoms of the order Pennales, characterized by an asymmetrical apical axis and strongly developed transverse internal costae.

**epithermal** *Thermodynamics*. slightly above a given thermal range.

**epithermal deposit** *Geology*. a hydrothermal mineral deposit formed by deposition from ascending hot solutions (at temperatures between 300°C and 200°C) in and along openings in rocks within 3000 feet of the earth's surface. Similarly, epithermal vein.

**epithermal neutron** *Nuclear Physics*. a neutron that has an energy level just above the thermal range, between about .02 and 100 electronvolts.

**epithermal reactor** *Nuclear Physics*. a reactor in which a significant fraction of fissions are caused by epithermal neutrons.

**epithermal thorium reactor** *Nuclear Physics*. a nuclear reactor in which epithermal neutrons, moderated by graphite or beryllium, unleash the energy contained in a uranium-thorium fuel mixture.

**epithet** *Systematics*. the second word in a binomen, or the second and third words in a trinomen, that identify a species or subspecies within a genus; in binomial nomenclature the epithet usually begins with a lowercase letter and is italicized.

**Epithyris** *Paleontology*. an extinct genus of articulate brachiopods in the order Terebratulida, widespread in the Jurassic.

**epitoke** *Invertebrate Zoology*. the rear portion of a marine polychaete worm in its reproductive state, swollen with eggs or sperm.

**epitoky** *Invertebrate Zoology*. the process by which marine polychaete worms become reproductive, shown by a seasonal modification in their gamete-bearing segments differing markedly from the usual nonsexual form.

**epitonic** *Neurology*. exhibiting an abnormally high degree of muscular tension or tone; tense.

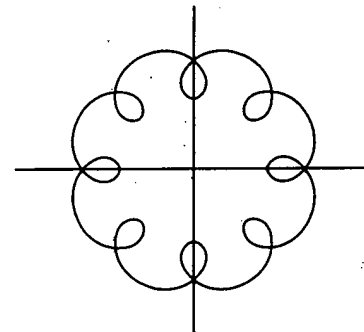
**epitope** *Immunology*. the area of an antigenic molecule that determines the specific antibody to which the antigen binds.

**epitryptic behavior** *Behavior*. behavior toward another animal of the same species that tends to cause that animal to approach.

**epitrichium** *Developmental Biology*. the large-celled outer layer of the bilaminar fetal epidermis of mammals. Also, PERIDERM.

**epitrochlear** *Anatomy*. of or relating to the medial condyle of the humerus.

**epitrochoid** *Mathematics*. a generalization of an epicycloid in which the tracing point may be fixed anywhere on the radius of the rolling circle or its extension instead of exactly on the circumference.



epitrochoid

**epituberculosis** *Medicine*. a prominent pulmonary shadow seen in X-ray films in active juvenile tuberculosis.

**epitympanum** *Anatomy*. the area of the middle ear above the level of the tympanic membrane that contains the head of the malleus and the body of the incus.

**epitype** *Immunology*. a family composed of epitopes having similar restrictive determinants.

**epivalve** *Invertebrate Zoology*. 1. the upper or apical shell of certain dinoflagellates. 2. the upper valve (epitheca) of a diatom.

**epixylous** *Ecology*. of or relating to an organism that grows on wood. Also, epixylic.

**epizone** *Geology*. in Grubenmann's classification of metamorphic rocks, the uppermost depth zone of metamorphism, characterized by moderate temperatures, low hydrostatic pressure, and powerful stress.

**epizootic** *Veterinary Medicine*. of or relating to a rapidly spreading disease affecting a large number of animals throughout a wide area; corresponds to the term epidemic in human medicine.

**epizootic lymphangitis** *Veterinary Medicine*. a chronic contagious disease of the family Equidae, also sometimes occurring in cattle but rarely in humans; characterized by thickening of a lymphatic vessel, swelling of the lymph nodes, ulcers of the mucous membranes of the nose and vulva or scrotum, and pneumonia; caused by *Histoplasma farciminosum*, which is transmitted by flies or discharges of diseased animals and enters the animal through a wound. Also, AFRICAN GLANDERS; LYMPHANGITIS EPIZOOTICA.

**epizootology** *Veterinary Medicine*. a science that deals with the frequency, distribution, cause, and control of disease in animals.

**E-plane antenna** *Electromagnetism*. an antenna whose radiated electric field lies in a plane parallel to the plane of the antenna.

**E-plane T-junction** *Electromagnetism*. a waveguide T-junction whose structure changes in the plane of the electric field. Also, SERIES T-JUNCTION.

**epoch** *Geology*. a unit of geologic time, longer than an age and representing a subdivision of a period during which the rocks of a particular series were formed. *Physics*. the initial set of conditions of a system, such as the initial phase angle of a simple harmonic oscillator.